

THE IMPACT OF DESEGREGATION ON THE FLORIDA STATEWIDE
TWELFTH GRADE ACHIEVEMENT TEST SCORES OF BLACK AND
WHITE STUDENTS IN A RURAL AND AN URBAN FLORIDA COUNTY

By

ANNIE DELORIES SMITH

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*To my father
for his assistance, encouragement and inspiration*

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Abstract of Dissertation Presented to the Graduate Council
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WHITE STUDENTS IN A RURAL AND AN URBAN FLORIDA COUNTY

By

Annie Delories Smith

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Chairman: Dr. Ted Landsman

Major Department: Counselor Education

A major purpose of this study was to investigate the impact of desegregation on the Florida Statewide Twelfth Grade Achievement Test scores of black and white high school seniors in a rural and an urban Florida county.

One thousand, four hundred sixteen students, all high school seniors, were divided into eight groups for this study. The groups were based on race, residence and school type. Group I consisted of 37 rural black segregated senior high school students; Group II included 151 rural white segregated senior high school students; Group III included 127 urban black segregated senior high school students; Group IV included 493 urban white segregated students; Group V consisted of 93 urban black desegregated students; Group VI included 52 rural black desegregated students; Group VII included 334 urban white desegregated senior high school students and Group VIII included 129 rural white desegregated senior high school students.

The schools were divided into four categories: (1) urban segregated, (2) rural segregated, (3) urban desegregated and (4) rural desegregated. The desegregated rural and urban schools were selected from schools that were segregated during 1962 but were desegregated in 1970. School A was a rural black segregated school. School B was a rural white segregated school. School C was an urban black segregated school and School D was an urban white segregated school. Schools B and D were desegregated in 1970 and were used for the 1973 data.

Analyses of variance of the data revealed significant differences between black and white students' test scores, urban and rural students' test scores and segregated and desegregated students' test scores. The differences were favorable toward white urban desegregated students' test scores.

CHAPTER I

PROBLEM AND PURPOSE OF THE STUDY

Introduction

Frequently, when a group gathers and discussions arise relative to current events, queries come to the forefront concerning desegregation and its effect on children. Blacks or other minorities discuss the issue as it affects members of their community and whites contemplate the degree of affect on white children. Some members of each group might raise the issue as it deals with either blacks or whites or both. Some would debate the issue of scholastic standards being lowered in formerly all white schools. Others might question whether or not blacks will be able to achieve at higher levels. St. John (1975) asked the question: What does desegregation do for and to children? Researchers have questioned whether students educationally disadvantaged as a result of segregated schools would or could benefit from desegregation.

Educators and sociologists argue the validity of the parameters used to denote cultural and socioeconomic

backgrounds of the citizenry. Some contend that socioeconomic lags are reflected in achievement and not race. Of the varying opinions that are discussed relative to the lack of economic and social advantages enjoyed by blacks over a period of time, the central question asked is, will these deficiencies effect black students' achievement when they are placed in predominantly white cultural education centers?

Many individuals discuss argumentatively whether or not there exists a genetic basis for differences in intelligence between the races which thereby effects academic achievement (Horton and Leslie, 1970; Jensen, 1969; Council of the Society for the Psychological Study of Social Issues, 1969; Stodolsky and Lesser, 1967).

The May, 1954 Supreme Court decision prohibiting legally enforced segregation has given rise to many doubts, anxieties and apprehensions in members of both races. Desegregationists argue for desegregation and contend that segregation violates human values. Segregationists on the other hand would contend just the opposite. What really happens to academic achievement of students when blacks and whites are educated together?

Purpose

There has been a tremendous amount of speculation surrounding the affect of desegregating public schools. Twenty-one years have passed since the United States Supreme Court's decision in Brown vs. Board of Education. Many school districts desegregated reluctantly, and many others desegregated due to court orders. Coleman (1975) stated, "I do not think it is appropriate to impose on school systems the requirement for a particular racial composition of schools simply because of the fact that it increased blacks' achievement" (p. 20-A). Jencks et al. (1972) stated that theories can be constructed to show that desegregation will make things better or that it will make them worse. Social scientists and lawyers have argued forcefully for legal desegregation. But will desegregation alone raise the educational achievement level of black students? Will desegregation alone lower the educational level of white students?

There is a need for more information on the black-white gap in achievement. Has the achievement level of black students increased since desegregation? Has the achievement level of white students decreased since desegregation? Because possible differences in academic achievement between segregated and desegregated black and white students is one of the problem areas in

desegregated education, this study joins the many research efforts which have already contributed valuable information in seeking to present some facts in this area.

The purpose of this study will be to ascertain differences in academic achievement between black and white, black and black, and white and white students during and after segregation.

Statement of the Problem

This study investigated the impact of desegregation on the Florida Statewide Twelfth Grade Achievement Test scores of black and white students in a rural and an urban Florida county.

Questions to be Answered

The following set of questions provides a summary of the problems that were investigated:

1. Are there significant differences between the achievement test scores of black students who attended predominantly black schools and black students who attended desegregated schools?
2. Are there significant differences between the achievement test scores of white students

who attended predominantly white schools and white students who attended desegregated schools?

3. Are there significant differences between achievement test scores of rural and urban black and white students?

Definition of Terms

Academic Achievement.—As used in this study, the knowledge attained in school subjects designated by scores on the Florida Statewide Twelfth Grade Achievement Test scores.

Desegregation.—The process which results in combining a minimum of 15 percent black students and 85 percent white students in the same school.

Race.—As used in this study, refers to blacks and whites only.

Residence.—The county where the students actually lived during their senior year of high school.

Rural Population.—As defined for the United States Census of 1970, includes all persons residing in rural territory of less than 2,500 population.

Urban Population.—As defined for the United States Census of 1970, includes all persons residing in incorporated or unincorporated places of 2,500 or above.

Limitations of the Study

This study was limited to twelfth grade students in an urban and a rural Florida county.

Another limitation of the study was differences in the Florida Statewide Achievement Test administered in 1962 and 1973. Although differences exist in the Florida Statewide Twelfth Grade Test for 1962 and 1973, the scores are consistent and comparable. The mean for 45,260 seniors who took the Florida Statewide Twelfth Grade Test in 1962 is 253 and the standard deviation is 129.51. The mean for 78,467 seniors who took the Florida Statewide Twelfth Grade test in 1973 is 253.19 and the standard deviation is 129.51.

Organization of the Remainder of the Study

Chapter II is a review of literature and includes the following sections: Education, Desegregation and the Supreme Court; Race, Intelligence and Academic Achievement; and Segregation, Desegregation and Academic Achievement. Chapter III contains Design and Methodology, plus a description of the Sample, Data Collection, Data Analysis, Hypotheses and a Comparison Chart for Hypotheses Testing. Chapter IV includes Findings and tables describing the findings. Chapter V contains the Summary, Conclusions, and Recommendations of the Study.

CHAPTER II

REVIEW OF THE LITERATURE

This study investigated the impact of desegregation on the Florida Statewide Twelfth Grade Achievement Test scores of black and white students in a rural and an urban Florida county.

Due to the diversity of the related literature, the present chapter is divided into three sections:

1. Education, Desegregation and the Supreme Court
2. Race, Intelligence and Academic Achievement
3. Segregation, Desegregation and Academic Achievement

Education, Desegregation and the Supreme Court

There has been a great deal of speculation on the effects of desegregating public schools. Twenty-one years have passed since the United States Supreme Court's ruling in Brown vs. Board of Education which outlawed separate but equal facilities.

Leflar and Davis (1954) stated that the Supreme Court's views on racial segregation in public schools began

with Plessy vs. Ferguson in 1896. The Court upheld a Louisiana statute requiring separate railroad accommodations for blacks and whites and referred to the prevailing practice of public school segregation as supporting that conclusion. The Gong v. Rice decision in 1927 also upheld the theory of separate but equal. This decision maintained that a child of Chinese ancestry could be required to attend schools established for the minority race in Mississippi without being denied equal protection of the laws guaranteed by the Fourteenth Amendment.

Beginning in 1939, "separate but equal" began undergoing attrition in higher education. In the Missouri ex. rel. v. Gaines case the Court held that the Equal Protection Clause gave to the plaintiff, a black man, a right to require the State of Missouri to furnish him facilities for legal education equal to those which the state furnished for persons of the white race. This decision was interpreted to permit a separate law school for blacks in Missouri. Another decision, Sipuel v. Board of Regents in 1948, was essentially the same, but Oklahoma complied by admitting the black applicant to the existent white school at the University of Oklahoma. Two years later (1950) in Sweatt v. Painter the Court held that a makeshift separate law school for blacks begun by the State of Texas did not offer "substantial equality" in legal

educational opportunities for the black plaintiff when compared with facilities available to white students at the University of Texas Law School. In the case, McLaurin v. Oklahoma State Regents, 1950, the Court made the decision that the plaintiff, a black graduate student in education already admitted to the University of Oklahoma, was being denied equal educational opportunities by a system devised to keep him away from his fellow classmates while he was in the same rooms and classes with them. Nevertheless, the Court did not say that segregation was inequality.

In December, 1952, four public school segregation cases were argued and submitted to the Supreme Court. These cases came from the States of Kansas, South Carolina, Delaware and the District of Columbia. Even though the cases had different facts they all had a common legal question which was whether a state could exclude children from public schools just on the basis that they were black. When Chief Justice Warren delivered his opinion to the Court on May 17, 1954, he stated,

In approaching this problem, we cannot turn the clock back to 1868 when the Amendment was adopted, or even to 1896 when Plessy v. Ferguson was written. We must consider public education in the light of its full development and its present place in American life throughout the Nation. Only in this way can it be determined if segregation in public schools deprives these plaintiffs of equal protection of the laws.

Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today, it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education! Such an opportunity, where the state had undertaken to provide it is a right which must be made available to all on equal terms.

We come then to the question presented: Does segregation of children in public schools solely on the basis of race, even though the physical facilities and other "tangible factors" may be equal, deprive the children of the minority group of equal educational opportunities? We believe that it does.

The Court not only laid down a rule of law; it altered an American way of life. Much has happened to blacks and whites and to education as a result of the Brown decision. This decision ranks as one of the most socially significant pieces of legislation in the history of America (Suchman, Dean and Williams, 1958). But as Askew (1972) stated, "It is time we forget the issues of the past and begin working together for a healthy system of public schools, one which provides each child not only with an 'equal' education—but with a quality education" (p. 5).

In conclusion, the Supreme Court's 1954 decision stressed the symbolic message that segregation conveyed the fact that segregation had been a symbol to the black child that equal treatment could not be expected. Desegregation stressed just the opposite. St. John (1975) stated "the desegregated school symbolized the victory of the black community in winning equal protection of the law. The black child in this school should therefore develop a stronger belief in his ability to control his environment" (p. 89).

Race, Intelligence and Academic Achievement

There are some social scientists and educators who claim that there are inherent ability differences between blacks and whites which thereby affect academic achievement. Horton and Leslie (1970) rejected this claim and stated that, "All important differences in personality, behavior and achievement are purely a result of environmental factors" (p. 352). Jensen (1969) argued that the heritability of intelligence is quite high and environmental factors are not nearly as important as genetic factors in determining the intelligence quotient of children. Jensen (1969) also suggested that "social class and racial variations in intelligence cannot be accounted for by differences in environment but must be attributed partially to

genetic differences" (p. 2). The Council of the Society for the Psychological Study of Social Issues (1969) issued the following statement on race and intelligence:

As behavioral scientists, we believe that statements specifying the hereditary components of intelligence are unwarranted by the present state of scientific knowledge.

. . . There are marked differences in intelligence test scores when one compares a random sample of whites and Negroes. What is equally clear is that little definitive evidence exists that leads to the conclusion that such differences are innate. The evidence points overwhelmingly to the fact that when one compares Negroes and whites of comparable cultural and educational background, differences in intelligence scores diminish markedly; the more comparable the background, the less difference. There is no direct evidence that supports the view that there is an innate difference between members of different racial groups. . . .(p. 1)

As early as 1934 Wilkerson studied the achievement differences between blacks and whites in three states using the Stanford Achievement Test. The findings showed that in all school systems studied, the general achievement level of black children tended to be lower than that of white children, and academic achievement differed widely between rural and urban schools in the same state. Stodolsky and Lesser (1967) pointed out that black and white intelligence differences lessen when the variables of sex, age, grade, socioeconomic status and years in school were controlled in black and white students.

Ginzberg (1956) stated,

The achievement of Negro children during the elementary grades is low because they bring to school the handicaps growing out of a childhood characterized by poverty, family instability, inferior social status, and isolation from the white community. There is evidence that the intellectual potential of Negro children growing up in deprived neighborhoods is already seriously stunted well before they reach school age. (p. 113)

In conclusion, the research has shown that when major variables are controlled there is little difference in intelligence and academic scores of children. There is little evidence to show that there are inherent ability differences between black and white children.

Segregation, Desegregation and Academic Achievement

Implementation of desegregation must be aimed at many segments of the American community. The issue of voluntary segregation poses a problem that deters desegregation. Carmichael and Hamilton (1967) argued that when black parents allow their children to attend majority white schools in white neighborhoods they are acting on the assumption that there is little of value existing in black communities. In order for black children to receive quality education, blacks must either move into white neighborhoods or send their children to predominantly white schools. Changes would occur in the lifestyles of blacks if school desegregation would succeed in raising the occupational level of

the black people. But the closing of black schools in the South has been accompanied by demotion of black personnel. According to Hall (1974) "the problem of the displaced Black educator is one that has exacted a heavy toll in the ranks of Black principals, who have long been symbols of attainment, authority and respect in Southern Black communities" (p. 7). Poussaint (1970) stated that

since integration is nearly always a one-way street that blacks travel to a white institution, then an implied inferiority of the black man is inherent in the situation, because it is he who must seek out whites to better his position. This implies that only he can benefit and learn; that he has nothing to offer whites; that blacks have nothing to offer whites; that whites have nothing to learn from his presence. (p. 13)

Crain (1971) stated:

some proponents favor desegregation in order to improve education for Negroes; others favor it despite their belief that it is irrelevant to the actual formal education of the Negro; still others feel that any effort to integrate schools is time wasted in a fruitless effort to obtain a symbolic victory and urge that the same energies be transferred to improving the quality of education in Negro schools. (p. 1)

One of the basic beliefs in American public education is that all children should have an equal opportunity to attain an equal education. Educational opportunities for students differ widely from rural to urban communities and from lower income communities and families to affluent communities and families. Differences in

educational opportunities create differences in academic achievement when measured by standardized instruments. One of the major reasons for the creation and existence of public schools has been to teach children skills such as reading, writing, addition, subtraction and specific concepts necessary for survival in society.

One way of assessing how well students have learned these skills is by using achievement tests to measure their performance in these areas. Tests are being used more and more in America today. Tests are required in order to gain employment, entrance to college and even to the armed services. Even though students enter first grade with different levels of skills and some leave twelfth grade better equipped than others they are usually given identical standardized tests to measure their achievement. The jobs acquired, colleges entered and attainment of other goals are usually partially accomplished based on standardized achievement test scores. Coleman et al. (1966) stated that there is probably a great difference in the validity of achievement tests as predictors of future success in life for students in urban and rural environments. There is probably a great difference in the validity of achievement tests as predictors of future success in life for minority and majority students. Fitz-Gibbons (undated pamphlet) stated that "until fairly

recently, most standardized tests were constructed by white middle-class people, who sometimes clumsily violate the feelings of the test-taker without even knowing it. In a way, one could say that we have been not so much culture biased as we have been culture blind" (pp. 2-3).

Clark and Plotkin (1963) studied the academic records of more than 500 black students that attended integrated colleges from 1952 through 1956. The aptitude scores of the black students, as measured by the Scholastic Achievement Test, were below the average of the national college population. Yet, significantly more of them completed college with at least average grades than did the total general population. Clark and Plotkin (1963) pointed out that the performance of the students was far greater than standardized tests had predicted.

Coleman et al. (1966) compared the achievement levels of segregated and desegregated students. The results of the study in summary form were:

1. The proportion of white students in a school had a positive relationship toward students' performance, however the effect appeared to be less than, and largely accounted for, by characteristics of the student body other than racial composition.

2. The earlier black students began attending schools with white students the higher black students' achievement.
3. The majority of American children attend schools that are segregated. Among the minority groups, blacks are by far the most segregated.
4. Desegregation on the basis of race and socioeconomic class improves student achievement under certain conditions and lowers achievement under certain conditions. Educational achievement for both minorities and whites begins to improve when schools are 50 percent white or higher, and 50 percent middle class or above. Both blacks and whites suffer in achievement when the racial or class percentage drops below 50 percent for either group.
5. White students' achievement is less affected by school facilities, curriculum and teachers than minority students' achievement.
6. The quality of the school attended by the average black is lower than that attended by the average white, but the difference is less than generally assumed.

According to Jencks et al., the average white child scores at least 15 points higher on most standardized tests

than the average black child. This is apparent among students when they enter school and it persists throughout school and college. Coleman et al. (1966) confirmed this when they stated, "For example, Negroes in the metropolitan Northeast are about 1.1 standard deviations below whites in the same region at grades 6, 9 and 12. But at grade 6 this represents 1.6 years behind; at grade 9, 2.4 years; and at grade 12, 3.3 years" (p. 21). It was further stated that few opportunities are provided in schools for blacks to overcome this difference in achievement test scores. " . . . In fact they fall farther behind the white majority in the development of several skills which are critical to making a living and participating fully in modern society" (p. 21).

Armor (1972) in a reanalysis of the Coleman (1966) data found black schools were more disadvantaged than white schools with respect to verbal achievement. The findings are summarized as follows:

1. In the first grades average black achievement in black schools is far behind white achievement in white schools, approaching 1.5 standard deviations in many regions.
2. In the sixth grades, the national averages show that black achievement is two standard deviations below white achievement.

3. The sixth grade black achievement within the majority white schools is higher than black achievement in majority black schools, but it is still almost 1.5 standard deviations below white achievement.
4. Although there are few whites in majority-black schools, they show the lowest achievement of any group. They have scores over 3 standard deviations lower than whites in majority-white schools.

It is apparent from the findings of this study that black students lag behind whites in achievement even before they start school. It seems they start school at a disadvantage.

Subsequent analysis of the Coleman Report by McPartland (1969) lends support to the conclusions regarding the relationship between classroom composition and achievement. McPartland (1969) found that school desegregation is associated with higher achievement for black students if they are in predominantly white classrooms. Subsequent to the findings of McPartland (1969), Cohen et al. (1972) suggested that desegregation where minority group students were not a majority appeared to improve the level of achievement for minorities. In both Pittsburg and Boston St. John and Smith (1970), St. John and Lewis (1971) found arithmetic achievement related to the total number of whites who had attended the school rather than the current percent white.

Students of high ability level are generally more ready to benefit from desegregation. According to Katz (1964) a desegregated classroom is socially facilitating to high achievers but threatening to low achievers, whose probability of success is apt to be low and who often fear failure. When studying the effects of integration for previously segregated children, Denmark (1970) found that segregated black children do not achieve academically at the same level as white children and earlier desegregation is more beneficial in improving test scores than that which occurs in later school years. It was also found that black females improve more than black males in the integrated setting. Crain (1971), in a survey of 1,600 adult blacks living in the metropolitan Northeast, found that the effects of integration are stronger for men than for women. The northern and southern segregated schools show that females have attained higher levels of education than males. There was also a large difference between the test scores of desegregated and segregated females. Females in desegregated schools have a tendency to attend school longer and learn "more" while they are there.

Alan Luneman (1973) in a cross-sectional and semi-longitudinal study in a Berkeley, California, community that desegregated voluntarily, found that ethnic groups showed gains in achievement ranging from 1.6 to 5.3 points

on standardized achievement tests over a two-year period. These gains are equivalent in grade placement of one to four months. Black students who remained in the district for the three-year period tended to score slightly higher in the successive years of desegregation.

Two studies frequently referred to as evidence of the beneficial effect of the desegregated school system are Hansen's (1960) study in Washington, D.C., and Stallings' (1959) study in Louisville. Hansen (1960) reported that after five years of desegregation, median city-wide achievement improved at all grade levels and in most subject areas for black children. White students also scored as well as they had scored under segregated conditions. Stallings (1959) in his report on academic achievement of black and white students both before and after desegregation found that the achievement of both groups was significantly higher after desegregation than before and that black students made greater gains than white students. Justin and Thabit (1974) conducted a study on achievement of black and white pupils before and after desegregation in Broward County, Florida. Their findings showed that the scholastic achievement of black and white pupils declined slightly initially but the decline was about the same for blacks and whites and was noted as insignificant.

Samuels (1958) conducted a study in Indiana which sought to determine if learning proceeded at

comparable rates for black and white children when they were first desegregated in junior high schools and when black students in desegregated schools were compared with those in segregated schools. Samuels attempted to control the variables of socioeconomic status and intelligence. It was found that after two years of desegregation, the achievement gap between black and white students had been reduced significantly. This finding was attributed directly to desegregation.

Maynor and Katzenmeyer (1974) conducted a study in Hoke County, North Carolina. The California Achievement Test was administered in grades six through 12 in order to provide baseline data. The California Achievement Test and the California Test of Mental Maturity were administered as posttest measures. The findings showed that black students performed better after desegregation than they did before desegregation.

Faulk (1972) reported that when desegregation took place in McKeesport, Pennsylvania, in Shaw Elementary School the black students at the desegregated school had an average achievement gain, as measured by the Iowa Test of Basic Skills, of nine months in a school year as compared to an average achievement gain of six months in a school year at the predominantly black school. These data tend to support the premise that achievement of black students becomes higher in a desegregated school. As reported in

Racial Isolation in the Public Schools (1967) Wilson conducted a study on the relationship between a student's social class and school achievement. Wilson (1967) found that social class was a major factor related to the academic achievement of children in elementary grades and children from poorer backgrounds are less likely than children from affluent backgrounds to have concrete plans for college. The U.S. Commission on Civil Rights (1967) pointed out that these results suggest that, "on the average, the social class of a student has a strong relationship to his academic success and aspirations" (p. 81).

Taken together these studies seem quite consistent. If desegregation over any length of time raises black students' scores slightly perhaps the scores of black students are continuing improving. Many of the studies showed that desegregation is associated with higher achievement test scores only if it involves socioeconomic as well as racial desegregation. There is little evidence to show that black students' test scores improve when the whites are as low on the socioeconomic scale as blacks. Even though the academic achievement of the black students is likely to improve when they attend desegregated schools this has not eliminated the achievement gap.

CHAPTER III

DESIGN AND METHODOLOGY

Design

This study investigated the impact of desegregation on the Florida Statewide Twelfth Grade Achievement Test scores of black and white students in a rural and an urban Florida county.

The study does not lend itself to experimental investigation; therefore, it is ex post facto. Kerlinger (1964) defines ex post facto research as a systematic empirical inquiry in which the researcher has no direct control of independent variables because their evidence has already occurred. In an ex post facto study neither experimental manipulation nor random assignment is possible.

There are eight groups in this study. Groups I through IV, who were selected from rural and urban segregated schools in 1962, will be compared with Groups V through VIII, who were selected from rural and urban desegregated schools in 1973. The year 1962 was chosen because this was the last year that Florida Statewide

Twelfth Grade Achievement Test results were reported on a segregated school basis. The year 1973 was selected because this was the first year since 1962 that race of the students was recorded along with test results.

There are three major types of comparison of the Florida Statewide Twelfth Grade Achievement Test in this study. The first type of comparison involves black students only. The second type of comparison involves white students only and the third type of comparison involves black and white students.

Sample

This study involved a total of 1416 twelfth grade students from four Florida high schools in two counties. The schools were subdivided into four categories: (1) urban segregated, (2) rural segregated, (3) urban de-segregated and (4) rural desegregated. The segregated rural and urban schools were selected from schools that were segregated during 1962. Of the four schools selected the two black segregated schools were no longer in existence as senior high schools. This means that the only schools used during 1973 were the white segregated schools that have since become desegregated.

A group of 37 black students and 151 white students who had attended rural segregated high schools in

1962 were selected from two schools in the same county based on the county's population. Then a group of 127 black students and 493 white students who attended urban segregated schools in 1962 were selected from two schools in the same county based on the county's population.

The next four groups were selected in much the same manner as the first four, with the major differences being the time of attendance, 1973, and both black and white students attended the same desegregated schools.

The 37 black students that comprise Group I were seniors in school A, a rural black segregated school in 1962. The 151 white students who comprise Group II were seniors in school B, a rural white segregated school in 1962. The 127 black students that make up Group III were seniors at school C, an urban black segregated school in 1962. The 493 white students that are in Group IV were seniors at school D, an urban white segregated school in 1962. The 37 black students in Group I and the 151 white students in Group II are from schools A and B located within the same county. The 127 black students in Group III and the 493 white students in Group IV are from schools C and D, located within the same county.

Group V consists of 93 black students in school D, a previously segregated white urban school that is presently desegregated. Group VI consists of 52 black students in school B, a formerly white rural segregated school

that is presently desegregated. Group VII is made up of 334 white students in school D, a previously white, urban segregated school that is presently desegregated. Group VIII consists of 129 white students in school B, a previously segregated white rural school that is presently desegregated. The black students in Group V and the white students in Group VII are from school D, the same urban desegregated school. The black students in Group VI and the white students in Group VIII are from school B, the same rural desegregated school.

In testing the eight groups for differences the results from the 1962 and 1973 Florida Statewide Twelfth Grade Test were used.

Setting

School D is an urban desegregated high school that has a total population of 1,800 students in grades 10 through 12. The school was constructed in the early 1900's and was attended by predominantly upper middle class whites until 1970 when the school desegregated in compliance with a court order. School D is presently 17 percent black and 83 percent white. This percentage reflects the black-white ratio of the community. The students who attend this high school come from four desegregated junior high schools.

School B is a rural desegregated high school which has a total population of 1100 students in grades nine through 12. The school was constructed in the early 1900's and served the entire white county high school population until 1970 when a court order forced the school to desegregate. The school is presently 22 percent black and 78 percent white. The students who attend this high school come from desegregated junior high schools.

Instrumentation

The instrument chosen for use in the present study was inaugurated in Florida in 1935 and since 1940 has been sponsored and conducted by the Board of University Examiners. During 1962 the A.C.E. Psychological Examination, 1953 High School Edition; Cooperative English B₂, Effectiveness of Expression, Form Y; Cooperative General Achievement, Form YZ—Social Studies, Natural Sciences and Mathematics tests were used. These instruments were validated by commercial testing companies and approved by the Board of University Examiners. Since 1963, Educational Testing Service of Princeton, New Jersey has prepared and validated special tests for the Florida program.

The Florida Statewide Twelfth Grade Testing Program is conducted in all Florida high schools each fall to provide comparable ability and achievement data on all

seniors. The test is administered by the pupil personnel staff in the schools. Florida seniors must attain a score of 300 or above on the test in order to attend a state university.

The complete battery consists of two booklets, including tests in five areas and the questionnaire. Table 1 shows the composition of each booklet, an indication of the test content, the number of items for each tests, and the time necessary to administer each section. However, after 1970 the Florida Statewide Twelfth Grade Achievement Test became optional rather than required for students. Therefore, some students choose not to take the test based on their future plans.

Scoring Procedures and Statistical Analysis

The answer sheets are processed at the University of Florida campus. All the tests are scored on a "Rights Only" basis—that is, an individual gets one point for each item answered correctly. There are eight scores derived from the test battery. These are: Verbal Aptitude, Quantitative Aptitude, Total Aptitude, English, Mathematics, Natural Sciences, and Social Studies. In addition, a Reading Index is computed by combining the score on the Verbal Aptitude test plus one-half the scores obtained on the English and Social Studies tests.

Table 1
Composition of the Test Battery

Title	Content	Items	Time
Student Questionnaire		73	20 min.
Aptitude Test	Verbal Analogies	50	20 min.
	Math Comparison	50	20 min.
English Composition	Usage	35	15 min.
	Capitalization and punctuation	20	10 min.
	Effectiveness of Expression	30	15 min.
Mathematics	Arithmetic		
	Algebra, Geometry	60	40 min.
Natural Sciences	Biology, Chemistry		
	Earth Science, Physics	60	40 min.
Social Studies	American History, Western Civiliza- tion, Geography,		
	Sociology	60	40 min.

The statewide norm for the 1973 administration of the battery is found in Table 2. The information included in Tables 1 and 2 is based on the 1973 Florida Statewide Twelfth Grade Achievement Test. The same kind of information is not available for the 1962 Florida Statewide Twelfth Grade Achievement Test.

Table 2

Statewide Norms, 1973*

Test	Aptitude	English	Soc.Stu.	Nat.Sci.	Math	Verb.Apt.	Quant.Apt.	Read.Index
No. Items	100	85	65	60.	60	50	50	125
Mean	52.48	48.87	32.74	26.16	26.47	26.15	26.33	66.70
Std. Dev.	16.06	15.46	11.79	9.37	10.60	8.26	8.95	20.20
Reliability	.93	.94	.92	.89	.92	.87	.89	Not Appropriate
Std. Error	4.18	3.71	3.30	3.09	2.97	2.97	2.95	Not Appropriate

* Number of schools = 401 Number of students = 78,467

Data Collection

The Board of University Examiners at the University of Florida, Gainesville, Florida is responsible for disseminating, scoring, collecting and storing data for the Florida Statewide Twelfth Grade Testing Program. The data were collected from the test record books and computer tapes stored by the Board of University Examiners, Room 408, Seagle Building, Gainesville, Florida.

The data for this study were obtained from the test results of the senior high school students who comprise the eight designated groups. Data were selected based on county and school area population in 1962 and the number of black and white students who attended county schools in 1962. Any county with a school population of less than 30 black or white students in the county or in one school was excluded from selection. Based on county and school population two counties and four schools were selected by chance. Data from students with less than five complete test scores was not used.

Data Analysis

The results of the Florida Statewide Twelfth Grade Achievement Test were used as a basis for determining and comparing the impact of desegregation on achievement. A percentile rank based on the raw score was recorded for

the five separate subtests from which a total composite score was computed for each student.

The nine hypotheses are the result of taking all possible combinations of race, residence and school type. A $2 \times 2 \times 2$ factorial analysis of variance design was used to compare and assess all of the variables and interactions simultaneously. This design makes it possible to assess the main effects of race, residence and school type on the Florida Statewide Twelfth Grade Achievement Test and it will also give information about interactions between race, residence and school type. The design will answer the following questions: What is the main effect of achievement scores of segregated and desegregated students? What is the main effect on achievement scores of rural and urban students? What is the main effect on achievement scores of black and white students?

When the three independent variables: race, residence and school type interact in their "effect" on achievement this is called interaction. The design answers the following questions regarding interaction: What is the interaction effect of race and residence on achievement test scores? What is the interaction effect of residence and school type on achievement test scores? What is the interaction effect of race, residence and school type on achievement test scores? The level of significance is set at .05.

Hypotheses

This study tested nine specific null hypotheses related to the impact of desegregation on achievement test scores as measured by the Florida Statewide Twelfth Grade Achievement Test. The following hypotheses are based on the students who were attending segregated schools in 1962 and desegregated schools in 1973. The following subtests are included: English, social studies, natural science and mathematical science. The hypotheses are:

1. There are no significant differences in students' achievement test scores related to race (black and white), residence (rural and urban) and school type (segregated and desegregated).
2. There will be no significant difference in achievement test scores between segregated and desegregated black students.
3. There will be no significant difference in achievement test scores between urban and rural desegregated black students.
4. There will be no significant difference in achievement test scores between desegregated and segregated white students.
5. There will be no significant difference in achievement test scores between urban and rural desegregated white students.

6. There will be no significant difference in achievement test scores between urban desegregated black and white students.
7. There will be no significant difference in achievement test scores between rural desegregated black and white students.
8. There will be no significant difference in achievement test scores between desegregated black and white students.
9. There will be no significant difference in achievement test scores between segregated black and white students.

Table 3
Hypotheses Testing

Group	Residence	Race	School Type	School Name
I	Rural	Black	Segregated	A
II	Rural	White	Segregated	B
III	Urban	Black	Segregated	C
IV	Urban	White	Segregated	D
V	Urban	Black	Desegregated	D
VI	Rural	Black	Desegregated	B
VII	Urban	White	Desegregated	D
VIII	Rural	White	Desegregated	B

Key for Hypotheses Testing

Hypotheses Number	Group
2	I, III vs. V, VI
3	V vs. VI
4	VII, VIII vs. V, IV
5	VII vs. VIII
6	V vs. VII
7	VI vs. VIII
8	V, VI vs. VII, VIII
9	I, III vs. II, IV

CHAPTER IV

FINDINGS

A major purpose of this study was to investigate the impact of desegregation on the Florida Statewide Twelfth Grade Achievement Test scores of black and white students in a rural and an urban Florida county.

Setting

School D is an urban desegregated high school that has a total population of approximately 1,800 students in grades 10 through 12. The school was constructed in the early 1900's and was attended by predominantly upper middle class whites until 1970 when the school desegregated in compliance with a court order. School D is presently 17 percent black and 83 percent white. This percentage reflects the black-white ratio of the community. The students who attend this high school come from four desegregated junior high schools.

School B is a rural desegregated high school which has a total population of 1,100 students in grades 9 through 12. The school was constructed in the early 1900's

and served the entire white county high school population until 1970 when a court order forced the school to desegregate. The school is presently 22 percent black and 78 percent white. The students who attend this high school come from desegregated junior high schools.

The nine hypotheses tested in this study are listed below:

1. There are no significant differences in students' achievement test scores related to race (black and white), residence (rural and urban) and school type (segregated and desegregated).
2. There are no significant differences in achievement test scores between segregated and desegregated black students.
3. There are no significant differences in achievement test scores between urban and rural desegregated black students.
4. There are no significant differences in achievement test scores between desegregated and segregated white students.
5. There are no significant differences in achievement test scores between urban and rural desegregated white students.

6. There are no significant differences in achievement test scores between urban desegregated black and white students.
7. There are no significant differences in achievement test scores between rural desegregated black and white students.
8. There are no significant differences in achievement test scores between desegregated black and white students.
9. There are no significant differences in achievement test scores between segregated black and white students.

Hypothesis 1

There are no significant differences in achievement test scores related to race (black and white), residence (urban and rural) and school type (segregated and desegregated).

Table 4 provides a comparison of mean scores for students who took the battery of achievement tests in their senior year (1962) after a segregated high school career as compared to those taking the battery of achievement tests in their senior year (1973) after a desegregated high school career. Race, residence and school type are indicated. The table includes the total test scores and the

Table 4

Comparison of Means of Black-White, Urban-Rural and Segregated-Desegregated Students' Scores on the Florida Statewide Twelfth Grade Test

		Segregated	Desegregated	Difference
Test				
Black		N=164	N=145	
	English	14.9	32.9	18.0
	Social Science	22.0	21.6	- .4
	Natural Science	19.7	17.2	- 2.5
	Mathematics	11.9	15.6	3.7
	Total	68.3	87.8	19.5
White		N=644	N=463	
	English	33.9	52.4	18.5
	Social Science	37.3	35.2	- 2.1
	Natural Science	33.0	28.1	- 4.9
	Mathematics	23.6	27.7	4.1
	Total	127.9	143.5	15.6

R A C E

Table 4 (continued)

		Test	Segregated	Desegregated	Difference
Rural	Urban		N=188	N=181	
		English	23.8	42.1	18.2
		Social Science	27.4	28.4	1.0
		Natural Science	26.9	22.4	- 4.5
		Mathematics	19.2	20.8	1.6
		Total	97.3	113.7	16.4
RESIDENT	RESIDENT		N=620	N=427	
		English	31.0	56.1	24.2
		Social Science	36.2	33.6	- 2.6
		Natural Science	31.4	26.8	- 4.6
		Mathematics	21.8	26.5	4.7
		Total	121.4	137.2	15.8

Table 4 (completed)

School Type	Test	Segregated		Desegregated		Difference
		N=808	N=608			
Segregated & Desegregated	English	30.0	47.7		17.7	
	Social Science	34.1	32.0		- 2.1	
	Natural Science	30.3	25.5		- 4.8	
	Mathematics	21.2	24.8		3.6	
	Total	115.8	130.2		14.4	

following subtests: English, social science, natural science and mathematics.

Both black and white students' scores (rural and urban) showed significant increases in total scores after desegregation. Black students' scores increased on all subtests except natural science where the scores decreased 2.5 points and social science where the scores decreased .4 points. The total score increased 19.5 points. White students' scores increased on the English and mathematics subtests but decreased in the areas of natural science and social science. However, the total score increased 15.6 points. Rural students' scores increased on all subtests except natural science and the scores decreased 4.5 points. The total score increased 16.4 points. Urban students' scores increased on all subtests but natural science and social science. Social science scores decreased 2.6 points and natural science scores decreased 4.6 points. The total score increased 15.8 points.

For comparisons between segregated students and desegregated students, the English score increased 17.7 points, the mathematics score increased 3.6 points and the total score increased 14.4 points. The social science score decreased 2.1 and the natural science score decreased 4.8 points. The null hypothesis is therefore largely rejected.

Three-way analyses of variance showed race, residence and school type were significant at the $p < .05$ or better (all but one at $p < .001$) level on all subtests and the total test score. This is presented in Table 5.

Because of the decreases on the natural science and social science subtests "t" tests were performed to determine if these decreases between 1962 and 1973 in the areas of social science and natural science were statistically significant.

The "t" tests showed that the decreases on the natural science and social science scores were statistically significant at the $p < .01$ level for all groups but the black students' decrease in social science. This is presented in Table 6.

Hypothesis 2

There are no significant differences in achievement test scores between segregated and desegregated black students.

Table 7 provides analyses of variance of Groups I (rural black segregated) and III (urban black segregated) combined and Groups V (urban black desegregated) and VI (rural black segregated) combined. The analyses of variance were significant at the .05 level on the total test scores and all subtests except social science. There

Table 5

Summary of Three-Way Analyses of Variance of Black-White,
Urban-Rural and Segregated-Desegregated Students' Scores
on the Florida Statewide Twelfth Grade Test
(Race x Residence x School Type)

Test	Source	Sum of Squares	DF	Mean Square	F
English	Main Effects	213007	3	71002	456*
	Race	86538	1	86538	556*
	Residence	15330	1	15330	98*
	School Type	122747	1	122747	789*
	Total	432231	1415	305	
Social Science	Main Effects	64541	3	21513	189*
	Race	49253	1	49253	434*
	Residence	12269	1	12269	108*
	School Type	435	1	435	3**
	Total	22601	1415	159	
Natural Science	Main Effects	48804	1	16268	211*
	Race	35293	1	35293	458*
	Residence	4535	1	4535	58*
	School Type	5960	1	5960	77*
	Total	157958	1415	111	

Table 5 (completed)

Test	Source	Sum of Squares	DF	Mean Square	F
Mathematics	Main Effects	42223	3	14081	149*
	Race	33120	1	33120	251*
	Residence	3850	1	3850	40*
	School Type	6332	1	6332	67*
	Total	175515	1415	124	
Total	Main Effects	1009693	3	336564	262*
	Race	784930	1	784930	612*
	Residence	132484	1	132484	103*
	School Type	110123	1	110123	85*
	Total	2819569	1415	1992	

*Significance of F $p < .001$ **Significance of F $p < .047$

Table 6

Statistical Analysis of Data for Segregated and Desegregated Groups on the Social Science and Natural Science Subtests of the Florida Statewide Twelfth Grade Test

Test	Group	N	\bar{X} Segregated	N	\bar{X} Desegregated	D	t
Social Science	Black	164	22.0	145	21.6	-.4	-.40*
Social Science	White	644	37.3	463	35.2	-2.1	3.02**
Social Science	Rural	188	27.4	181	28.4	1.0	-.82*
Social Science	Urban	620	36.2	427	33.6	-2.6	3.30**
Natural Science	Black	164	19.7	145	17.2	-2.5	3.26**
Natural Science	White	644	33.0	463	28.1	-4.9	8.59**
Natural Science	Rural	188	26.9	181	22.4	-4.5	4.27**
Natural Science	Urban	620	31.4	427	26.8	-4.6	7.22**

*not significant

**significant at .01

Table 7

Summary of One-Way Analyses of Variance of Black Segregated and Desegregated Students' Scores on the Florida Statewide Twelfth Grade Test (Black x School Type)

Test	Source	Sum of Squares	DF	Mean Square	F
English	Main Effects	25024	1	25024	197*
	School Type	25024	1	25024	197*
	Total	63899	308	207	
Social Science	Main Effects	14	1	14	164**
	School Type	14	1	14	164**
	Total	26846	308	87	
Natural Science	Main Effects	512	1	512	10***
	School Type	512	1	512	10***
	Total	15287	308	49	
Mathematics	Main Effects	1023	1	1023	26*
	School Type	1023	1	1023	26*
	Total	13011	308	42	
Total	Main Effects	29355	1	29355	35*
	School Type	29355	1	29355	35*
	Total	282145	308	916	

black segregated N=164; black desegregated N=145

*significant at $p < .001$

**significant at $p < .999$

***significant at $p < .002$

were no significant differences between black segregated and black desegregated students on the social science test. Except for the social science test the null hypothesis is therefore rejected.

Hypothesis 3

There are no significant differences in achievement test scores between urban and rural desegregated black students.

Table 8 provides a comparison of means between Group V (urban desegregated blacks) and Group VI (rural desegregated blacks). When comparing the means of urban desegregated blacks with rural desegregated blacks the black urban students' scores were higher on all subtests and the total test score was higher.

Table 9 provides analyses of variance of urban and rural desegregated black students' scores. The analyses of variance showed that there were significant differences between rural black desegregated students' scores and urban black desegregated students' scores on all tests except natural science. The analysis of variance on the natural science test did not quite meet the $p < .05$ level of significance. Except for the natural science test the null hypothesis is therefore rejected.

Table 8
Cell Means for Urban and Rural Desegregated Black Students' Scores on the
Florida Statewide Twelfth Grade Test

Test	N	Urban	Rural	N	Difference
English	93	35.2	28.8	52	6.4
Social Science	93	23.3	19.9	52	4.0
Natural Science	93	17.9	15.9	52	2.0
Mathematics	93	16.9	13.2	52	3.7
Total Test	93	93.5	77.8	52	15.7

Table 9

Summary of One-Way Analyses of Variance of Urban and Rural Desegregated Black Students' Scores on the Florida State-wide Twelfth Grade Test (Black Desegregated Residence)

Test	Source	Sum of Squares	DF	Mean Square	F
English	Main Effects	1362	1	1362	9*
	Residence	1362	1	1362	9*
	Total	21592	144	149	
Social Science	Main Effects	422	1	422	6**
	Residence	422	1	422	6**
	Total	10185	144	70	
Natural Science	Main Effects	136	1	136	3***
	Residence	136	1	136	3***
	Total	5651	144	39	
Mathematics	Main Effects	471	1	471	11****
	Residence	471	1	471	11****
	Total	6353	144	44	
Total	Main Effects	8252	1	8252	10*****
	Residence	8252	1	8252	10*****
	Total	117856	144	818	
*Significance of F .003					
**Significance of F .013					
***Significance of F .059					
****Significance of F .001					
*****Significance of F .002					

Hypothesis 4

There are no significant differences in achievement test scores between desegregated and segregated white students.

Table 10 provides analyses of variance on the English, social science, natural science and mathematics subtests and the total test score between Groups VII (urban white desegregated) and VIII (rural white desegregated) combined and Groups II (rural white segregated) and IV (urban white segregated) combined. The results were significant at the $p < .05$ level on each subtest and the total test scores therefore the null hypothesis is rejected.

Hypothesis 5

There are no significant differences in achievement test scores between urban and rural desegregated white students.

Table 11 provides cell means for white urban and rural desegregated students' scores. When comparing the mean scores between Group VII (urban white desegregated) and Group VIII (rural white desegregated) urban white desegregated students' scores were higher on each of the subtests and the total test scores. The differences

Table 10

Summary of One-Way Analyses of Variance of Desegregated and Segregated White Students' Scores on the Florida Statewide Twelfth Grade Test (White x School Type)

Test	Source	Sum of Squares	DF	Mean Square	F*
English	Main Effects	92174	1	92174	520
	School Type	92164	1	92174	520
	Total	287849	1106		
Social Science	Main Effects	1212	1	1212	9
	School Type	1212	1	1212	9
	Total	147745	1106	133	
Natural Science	Main Effects	6590	1	6590	73
	School Type	6590	1	6590	73
	Total	105183	1106	95	
Mathematics	Main Effects	4662	1	4662	41
	School Type	4662	1	4662	41
	Total	129788	1106	117	
Total	Main Effects	65472	1	65472	42
	School Type	65472	1	65472	42
	Total	1754321	1106	1581	

*Significance of F $p < .001$

Table 11
Cell Means for Urban and Rural Desegregated White Students' Scores
on the Florida Statewide Twelfth Grade Test

Test	N	Urban	Rural	N	Difference
English	334	54.2	47.5	129	6.7
Social Science	334	36.5	31.8	129	4.7
Natural Science	334	29.3	25.1	129	4.2
Mathematics	334	29.2	23.8	129	5.4
Total Test	334	149.4	128.3	129	21.1

in the means were: English, 6.7 points; social science, 4.7 points; natural science, 4.2 points; mathematics, 5.4 points and the total score was 21.1 points higher for urban whites.

Table 12 provides one-way analyses of variance between urban white desegregated students and rural white desegregated students on the English, social science, natural science and mathematics subtests and the total test score. The results were significant on each of the subtests and the total score at the .05 level. The null hypothesis is therefore rejected.

Hypothesis 6

There are no significant differences in achievement test scores between urban desegregated black and white students.

Table 13 provides a comparison of mean scores between Group V (urban black desegregated) and Group VII (urban white desegregated). When comparing the mean scores between urban black desegregated students and urban white desegregated students the means scores for urban white students were higher in the following areas: English, 19.0 points higher; social science, 13.2 higher; natural science, 11.4 points higher; mathematics, 12.3 points higher and the total test score was 55.9 points higher.

Table 12

Summary of One-Way Analyses of Variance of White Desegregated
Urban and Rural Students' Scores on the Florida Statewide
Twelfth Grade Test (White x Residence)

Test	Source	Sum of Squares	DF	Mean Square	F*
English	Main Effects	4250	1	4250	24
	Residence	4250	1	4250	24
	Total	83482	462	180	
Social Science	Main Effects	1997	1	1997	17
	Residence	1997	1	1997	17
	Total	54352	462	117	
Natural Science	Main Effects	1655	1	1655	23
	Residence	1655	1	1655	23
	Total	34178	462	73	
Mathematics	Main Effects	2725	1	2725	35
	Residence	2725	1	2725	35
	Total	38524	462	83	
Total	Main Effects	41122	1	41122	33
	Residence	41122	1	41122	33
	Total	610423	462	1321	

*Significance of F $p < .001$

Table 13

Cell Means for Urban Black Desegregated Students' Scores and Urban White Desegregated Students' Scores on the Florida Statewide Twelfth Grade Test

Test	N	Urban Black	Urban White	N	Difference
English	93	35.2	54.2	334	19.0
Social Science	93	23.3	26.3	334	13.2
Natural Science	93	17.9	29.3	334	11.4
Mathematics	93	16.9	29.2	334	12.3
Total Test	93	93.5	149.4	334	55.9

Table 14 shows analyses of variance between urban black desegregated students' scores and urban white desegregated students' scores on each subtest and the total test score. The analyses of variance showed that there were significant differences between the groups at the $p < .05$ level on each test. Therefore the null hypothesis is rejected.

Hypothesis 7

There are no significant differences in achievement test scores between rural desegregated black and white students.

Table 15 provides a comparison of mean scores on each subtest between Group VI (rural black desegregated) and Group VIII (rural white desegregated). When comparing the mean test scores between rural black desegregated students and rural white desegregated students the mean scores for Group VIII are higher on each of the subtests the total test score. The differences in means were: English, 18.7 points higher; social science, 11.9 points higher; natural science, 9.2 points higher; mathematics, 10.6 points higher and the total test score was 50.5 points higher for rural desegregated whites than for rural desegregated blacks. The null hypothesis is rejected.

Table 14

Summary of One-Way Analyses of Variance of Urban Desegregated Black and White Students' Scores on the Florida Statewide Twelfth Grade Test (Urban, Desegregated x Race)

Test	Source	Sum of Squares	DF	Mean Square	F*
English	Main Effects	26358	1	26358	163
	Race	26358	1	26358	163
	Total	94965	426	222	
Social Science	Main Effects	12566	1	12566	127
	Race	12566	1	12566	127
	Total	54596	426	54596	
Natural Science	Main Effects	9456	1	9456	152
	Race	9456	1	9456	152
	Total	54596	426	128	
Mathematics	Main Effects	10975	1	10975	155
	Race	10975	1	10975	155
	Total	40923	426	96	
Total	Main Effects	22701	1	22701	
	Race	22701	1	22701	210
	Total	684522	426	1606	

*Significance of F $p < .001$

Table 15

Cell Means for Rural Black Desegregated Students' Scores and Rural White Desegregated Students' Scores on the Florida Statewide Twelfth Grade Test

Test	N	Rural Black	Rural White	N	Difference
English	52	28.8	47.5	129	18.7
Social Science	52	19.9	31.8	129	11.9
Natural Science	52	15.9	25.1	129	9.2
Mathematics	52	13.2	23.8	129	10.6
Total Test	52	77.8	128.3	129	50.5

Table 16 provides one-way analyses of variance between Group VI (rural black desegregated) and Group VIII (rural white desegregated) on each of the subtests and the total test score. The analyses of variance showed that there were significant differences between rural black desegregated students' scores and rural white desegregated students' scores at the $p < .05$ level. The null hypothesis is rejected.

Hypothesis 8

There are no significant differences in achievement test scores between desegregated black and white students.

Table 17 provides analyses of variance between Groups V (urban black desegregated) and VI (black rural desegregated) combined and Groups VII (urban white desegregated) and VIII (rural white desegregated) combined on the English, social science, natural science and mathematics subtests and the total test score. The analyses of variance showed that there were significant differences between desegregated black students' scores and desegregated white students' scores. The differences between the test scores of desegregated black students and desegregated white students were significant at the $p < .05$ level. Therefore the null hypothesis is rejected.

Table 16

Summary of One-Way Analyses of Variance of Rural Desegregated Black and White Students' Scores on the Florida Statewide Twelfth Grade Test (Rural, Desegregated x Race)

Test	Source	Sum of Squares	DF	Mean Square	F*
English	Main Effects	12917	1	12917	74
	Race	12917	1	12917	74
	Total	43771	180	243	
Social Science	Main Effects	5397	1	5397	48
	Race	5397	1	5397	48
	Total	25485	180	141	
Natural Science	Main Effects	3140	1	3140	48
	Race	3140	1	3140	48
	Total	14832	180	82	
Mathematics	Main Effects	4187	1	4187	63
	Race	4187	1	4187	63
	Total	15919	180	88	
Total	Main Effects	94784	1	94784	76
	Race	94784	1	94784	76
	Total	316184	180	1756	

*Significance of F $p < .001$

Table 17

Summary of One-Way Analyses of Variance of Black Desegregated Students' Scores and White Desegregated Students' Scores on the Florida Statewide Twelfth Grade Test (Desegregation x Race)

Test	Source	Sum of Squares	DF	Mean Square	F*
English	Main Effects	41749	1	41749	240
	Race	41749	1	41749	240
	Total	146817	607	241	
Social Science	Main Effects	19031	1	19031	178
	Race	19031	1	19031	178
	Total	83565	607	137	
Natural Science	Main Effects	13242	1	13242	201
	Race	13242	1	13242	201
	Total	53071	607	87	
Mathematics	Main Effects	16228	1	16228	219
	Race	16228	1	16228	219
	Total	61106	607	100	
Total	Main Effects	341934	1	341934	284
	Race	341934	1	341934	284
	Total	1070206	607	1763	

*Significance of F $p < .001$

Hypothesis 9

There are no significant differences in achievement test scores between segregated black and white students.

Table 18 provides analyses of variance between Groups I (rural black segregated) and III (urban black segregated) combined, and Groups II (white rural segregated) and IV (white urban segregated) combined on the English, social science, natural science and mathematics subtests and the total test score. The analyses of variance showed that there were significant differences between segregated black and white students' test scores at the $p < .05$ level. Therefore the null hypothesis is rejected.

Summary

Analysis of this data showed that there are significant statistical differences in achievement test scores between race, residence and school type. Statistical analysis further revealed that there are significant differences in achievement test scores between segregated and desegregated black students' scores on each test except social science and between urban and rural black students on each test except natural science. There are significant statistical differences in achievement test scores between urban and rural desegregated white students and between

Table 18

Summary of One-Way Analyses of Variance of Black Segregated Students' Scores and White Desegregated Students' Scores on the Florida Statewide Twelfth Grade Test (Segregated x Race)

Test	Source	Sum of Squares	DF	Mean Square	F*
English	Main Effects	47081	1	47081	293
	Race	47081	1	47081	293
	Total	176561	807	218	
Social Science	Main Effects	32144	1	32144	238
	Race	32144	1	32144	238
	Total	140977	807	174	
Natural Science	Main Effects	23182	1	23182	254
	Race	23182	1	23182	254
	Total	96725	807	119	
Mathematics	Main Effects	17619	1	17619	153
	Race	17619	1	17619	153
	Total	109864	807	136	
Total	Main Effects	464120	1	464120	308
	Race	464120	1	464120	308
	Total	1677559	806	2078	

*Significance of F $p < .001$

desegregated black and white students. Further analysis also revealed that there are significant statistical differences in achievement test scores between segregated black and white students.

Discussion of Findings

Race, Residence and School Type

There were significant differences on each of the subtests and the total test score between race, residence and school type. The means revealed were in favor of white, urban, desegregated students on the English and mathematics subtests and the total test score. The segregated students scored better than desegregated students in the areas of social science and natural science. This could possibly be accounted for due to the changes in the social science and natural science curricula. Between 1962 and 1973 the social science curriculum was broadened in many senior high schools to include psychology and sociology courses along with history courses. The number of required high school units in social science also decreased. Since the number of units decreased many students may have elected not to enroll in social science courses after they had fulfilled their high school graduation requirements in this area.

The natural science curriculum was altered between 1962 and 1973. Students who were classified as "high achievers" were encouraged to enroll in new and different science courses such as biology (BSCS), physical science (PSCS), and chemistry study wherein average students were usually encouraged to enroll in general biology. Along with the new courses came changes in teaching methods. The traditional lecture plus experimentation method was abandoned and the new inquiry plus experimentation method was in vogue.

Black Segregated—Black Desegregated

Black students' scores increased on each of the subtests except social science and natural science. The social science score decreased by only .4 points but the natural science score decreased 2.5 points. However the total score increased by 19.5 points. The statistical analyses do not answer causative questions for the differences in achievement between black segregated and black desegregated students' scores but it appears that the findings of this study corroborate the findings of the Coleman Report (1966) which concluded that desegregation raised the achievement level of black students and that the proportion of white students in a school has a positive relationship toward students' performance. Crain (1971)

found that black students who attended desegregated schools scored higher on achievement tests than those who attended segregated schools. Coleman (1966) stated that a higher percentage of the achievement test scores of blacks in the South is associated with the particular school they attend. Therefore the average black student's scores could suffer more in a school of low quality. Each group of black students was transferred from a segregated school with a lower budget, fewer facilities and a narrower range of course offerings to a previously all white school with a higher budget, more facilities and a broader range of course offerings. This corroborates another of Coleman's (1966) findings that variations in the facilities and curricula of the schools make more difference in black students' achievement.

Urban and Rural Desegregated Black and White

Urban desegregated white students' mean score for the total test was 55.9 points higher than urban black students' mean score. Even though this represents a large gap between the achievement of black and white students, it is smaller than the difference between urban segregated whites and urban segregated blacks. The total score for urban white segregated students was 59.0 points higher than the total score for black urban segregated students. The total score increased for blacks since 1962 but there is still a

large gap to close before the total score for blacks equals the total score for whites. This small increase in the total score could possibly be attributed to the fact that many blacks were not guided into a college preparatory curriculum during the early years of school desegregation and probably did not enroll in many major academic courses other than required courses. Also they came from schools that were less well equipped. Another factor which could have made some difference is the fact that even though schools were desegregated defacto segregation took place and many black students were tracked, grouped and placed in the same segregated situation.

The analyses of variance were significant on each of the tests except social science. Again, this exception could be attributed to the decrease in the number of high school units required in this area and broadening the offerings in this area.

Hansen (1960) found that after five years of desegregation, median city-wide achievement improved at all grade levels and in most subject areas for black children. Stallings (1959) reported that achievement for black and white groups was significantly higher after desegregation than before and that black students made greater gains than white students. Jencks (1972) states that the average white student scores at least 15 points higher than the

average black student on standardized tests. Fitzgibbon (undated pamphlet) states that standardized test makers are white middle class people who have been culturally blind and this could be a disadvantage for black students. Coleman (1966) however insists that standardized tests are not "nor are they intended to be 'culture free'" (p. 20).

White Urban—White Rural Desegregated

Urban white desegregated students' scores were higher on each of the subtests and the total test score. This result could be attributed to the limited number of course offerings in rural schools and the vast number of different educational experiences that urban schools offer their students. Coleman (1966) states that there is probably a great difference in the validity of achievement test scores as predictors of future success in life for students in urban and rural environments. Differences in educational opportunities create differences in academic achievement when measured by standardized instruments.

White Segregated—White Desegregated

White desegregated students' scores increased 18.5 points in English, 4.1 points in mathematics and 15.6 points on the total score. This increase coincides with Stallings' (1959) findings that achievement scores for

whites increased after desegregation. The scores decreased in social science 2.1 points and natural science 4.9 points. Again this result could possibly be attributed to the difference in curriculum changes and teaching methods in the schools. Also the Florida Statewide Twelfth Grade Test has not been mandatory for all seniors since 1970 and there is a possibility that low achieving, non-college bound students elected not to take the test.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to ascertain differences in achievement test scores between black and white, urban and rural and segregated and desegregated senior high school students.

One thousand, four hundred sixteen students, all high school seniors, were divided into eight groups for this study. The groups were based on race, residence and school type. Group I consisted of 37 rural black segregated senior high school students; Group II included 151 rural white segregated senior high school students; Group III included 127 urban black segregated senior high school students; Group IV included 493 urban white segregated students; Group V consisted of 93 urban black desegregated students; Group VI included 52 rural black desegregated students; Group VII included 334 urban white desegregated senior high school students and Group VIII included 129 rural white desegregated senior high school students.

The schools were divided into four categories:

- (1) urban segregated, (2) rural segregated, (3) urban

desegregated and (4) rural desegregated. The desegregated rural and urban schools were selected from schools that were segregated during 1962. The schools used during 1973 were white segregated schools that became desegregated in 1969. School A was a rural black segregated school. School B was a rural white segregated school. School C was an urban black segregated school and School D was an urban white segregated school. Schools B and D were used for 1973 data.

Analyses of variance of the data revealed significant differences between black and white students' test scores, urban and rural students' test scores and segregated and desegregated students' test scores. The differences were favorable toward white urban desegregated students' scores.

Conclusions

A major conclusion reached as a result of the findings of this study is that desegregation has not had a negative effect on total test scores for black and white students and urban and rural students. It is recognized that several other factors could have caused changes in the Florida Statewide Twelfth Grade Test scores but since desegregation a greater number of blacks have obtained higher test scores.

On the basis of the findings of this study, 10 other conclusions are offered:

1. There was a significant difference between black segregated students' total test score and black desegregated students' total test score. The score was higher for black desegregated students.

2. There was a significant difference in test scores between urban and rural desegregated black students. The scores were higher for urban desegregated black students.

3. There was a significant difference in test scores between segregated and desegregated white students on the total test. The test score was higher for desegregated white students.

4. There was a significant difference in test scores between urban and rural desegregated white students. The test scores were higher for urban desegregated white students.

5. There was a significant difference in achievement test scores between urban segregated black and urban desegregated white students. The scores were higher for urban desegregated white students.

6. There was a significant difference in achievement test scores between rural desegregated black and rural desegregated white students. The scores were higher for rural desegregated white students.

7. There was a significant difference in achievement test scores between desegregated black and white students. The scores were higher for desegregated white students.

8. There was a significant difference in achievement test scores between segregated black and white students. The scores were higher for segregated white students.

9. Black, white, urban and segregated students performed better on the social science test during segregation than during desegregation. Rural students' test scores increased not significantly in social science.

10. Black, white, urban and rural students had higher mean scores on the natural science subtest during segregation than during desegregation.

Recommendations

It is felt that this study would have been stronger had socioeconomic factors been taken into account. It is an established fact that socioeconomic factors have some relationship to achievement. A study similar to this one wherein socioeconomic factors are controlled would be enlightening.

These findings have shown that the achievement of black and white students increased after four years

of desegregation. Nevertheless, white students' achievement test scores are higher than those of black students' achievement test scores. A study in which black and white students have been desegregated for 12 consecutive school years before taking the Florida Statewide Twelfth Grade Test is recommended.

An investigation of changes in the social science and natural science curricula and an item analysis of the Florida Statewide Twelfth Grade Test in the areas of social science and natural science are advocated.

The present curricula in natural science and social science should be re-evaluated by educators in the Florida school system.

The fact that the differences in achievement test scores are much greater for white students than for black students could possibly indicate the need for more educational support services for black students. The difference between scores for black students and white students indicates a need for continuing the present special programs in the state universities that allow black students and other minority students to gain admission to state universities with less than the required entrance score of 300 on the Florida Statewide Twelfth Grade Test.

BIBLIOGRAPHY

- Armor, David J. School and family effects on black and white achievement: A reexamination of the USOE data. In F. Mosteller and D. Moynihan (Eds.), On Equality of Educational Opportunity. New York: Vantage Books, 1972.
- Askew, Reubin O'D. Temporary hardship or continuing injustice? Integrated Education, 1972, 10 (1), 3-6.
- Board of University Examiners. The Florida Statewide Twelfth Grade Achievement Test. Gainesville: University of Florida Press.
- Brown v. Board of Education, 347, 483 (1955).
- Brown v. Board of Education of Topeka et al. 349 U.S. 294 (1955).
- Carmichael, Stokeley and Hamilton, Charles. Black Power. New York: Vantage Books, 1967.
- Clark, Kenneth B. and Plotkin, Lawrence. The Negro Student at Integrated Colleges. New York: National Scholarship Service Fund for Negro Students, 1963.
- Cohen, David; Pettigrew, Thomas F.; and Riley, Robert. Race and the outcomes of schooling. In F. Mosteller and D. Moynihan (Eds.), On Equality of Educational Opportunity. New York: Vantage Books, 1972.
- Coleman, James S.; Campbell, Ernest Q.; Hobson, Carol J.; McPartland, James; Mood, Alexander; Weinfeld, Frederic D.; and York, Robert L. Equality of Educational Opportunity. U. S. Department of Health, Education and Welfare. Washington, D. C.: United States Government Printing Office, 1966.
- Coleman, James S. Courts may create segregation. Miami Herald, June 1, 1975.

- Crain, Robert L. School integration and the academic achievement of Negroes. Sociology of Education, 1971, 44, 1-26.
- Crain, Robert L. and Weisman, Carol S. Discrimination, Personality, and Achievement. New York: Seminar Press, 1972.
- Denmark, Florence L. The effect of integration on academic achievement and self-concept. Integrated Education: Race and Schools, 1970, 8 (3), 34-42.
- Faulk, Harry R. Desegregation in McKeesport. Integrated Education: Race and Schools, 1972, 10 (1), 35-37.
- FitzGibbon, Thomas J. The Use of Standardized Instruments with Urban and Minority-Group Pupils. Test Department: Harcourt Brace Jovanovich, Inc. (undated pamphlet).
- Ginzberg, Eli. The Negro Potential. New York: Columbia University Press, 1956.
- Hall, Leon. School desegregation: A (hollow?) victory. Inequality in Education, June, 1974, 17, 5-14.
- Hansen, Carl F. The scholastic performance of Negro and white pupils in the integrated public schools of the District of Columbia. Harvard Educational Review, 1960, 30 (3), 216-236.
- Horton, Paul B. and Leslie, Gerald R. The Sociology of Social Problems. New York: Appleton-Century-Crofts, 1970.
- Jencks, Christopher; Smith, Marshall; Acland, Henry; Bane, Mary J.; Cohen, David; Gintis, Herbert; Heyns, Barbara; and Michelson, Stephan. Inequality: A Reassessment of the Effect of Family and Schooling in America. New York: Basic Books, Inc., 1972.
- Jensen, Arthur R. How much can we boost I.Q. and scholastic achievement? Harvard Educational Review, 1969, 39 (1), 1-123.
- Justin, Neal E. and Thabit, Judy. Black and white achievement before and after integration. Intellect, 1974, 102 (2357), 458-459.
- Katz, Irwin A. A critique of personality approaches to Negro performance, with research suggestions. Journal of Social Issues, 1969, 25 (3), 13-28.

- Kerlinger, Fred N. Foundations of Behavioral Research.
New York: Holt, Rinehart and Winston, Inc., 1964.
- Leflar, Robert A. and Davis, Wylie H. The supreme court cases. Harvard Law Review, 1954, 67 (3), 377-429.
- Luneman, Alan. Desegregation and achievement: A cross-sectional and semi-longitudinal look at Berkeley, California. The Journal of Negro Education, 1973, 42 (4), 439-446.
- Maynor, Waltz and Katzenmeyer, W. G. Academic performance and school integration: A multiethnic analysis. The Journal of Negro Education, 1974, 43 (1), 30-38.
- McLaurin v. Okalahoma State Regents. 339 U. S. 637 (1950).
- McPartland, James. The relative influence of school and of classroom desegregation on the academic achievement of ninth grade Negro students. Journal of Social Issues, 1969, 25 (3), 93-102.
- McPartland, James. The segregated student in desegregated schools. Final Report to the Center for the Study of Social Organization of Schools. Baltimore, Md.: Johns Hopkins University, 1968 (St. John, Nancy. Desegregation Outcomes for Children. New York: John Wiley and Sons, 1975).
- Missouri ex. rel. Gaines v. Canada, 305 U. S. 337 (1938).
- Plessy v. Ferguson, 163 U. S. 537, 165 ct. 1138 (1896).
- Poussaint, Alvin F. Introduction to What Students Perceive (A Report to the U. S. Commission on Civil Rights) Clearing House Publication, 24, 1970.
- Samuels, Ivan G. Desegregated Education and Differences in Academic Achievement (Doctoral dissertation, Indiana University), University Microfilms, 1958, No. 58-2934.
- Sipuel v. Board of Regents, 332 U. S. 631 (1948).
- Stallings, Frank H. A study of the immediate effects of integration on scholastic achievement in the Louisville public schools. Journal of Negro Education, 1959, 28, 439-44.
- St. John, Nancy H. School Desegregation Outcomes for Children. New York: John Wiley and Sons, 1975.

St. John, Nancy H. and Lewis, Ralph G. The influence of school racial context on academic achievement. Social Problems, 1971, 19, 68-78.

St. John, Nancy H. and Smith, Marshall S. School racial composition, aspiration and achievement, 1970. (St. John, Nancy H. Desegregation Outcomes for Children. New York: John Wiley and Sons, 1975).

Stodolsky, Susan S. and Lesser, Gerald. Learning patterns in the disadvantaged. Harvard Educational Review, 1967, 37, 546-593.

Suchman, Edward A.; Dean, John P.; and Williams, Robin M. Desegregation: Some Propositions and Research Suggestions. New York: Anti-Defamation League of B'Nai B'Rith, 1958.

Sweatt v. Painter, 339 U. S. 629 (1950).

The Council of the Society for the Psychological Study of Social Issues. SPSSI Council statement on race and intelligence. Journal of Social Issues, 1969, 25 (3), 1-2.

Wilkerson, Doxey. Racial differences in scholastic achievement. The Journal of Negro Education, 1934, 3, 88-89.

Wilson, Alan. Educational consequences of segregation in a California community. (Racial Isolation in the Public Schools. A report of the United States Commission on Civil Rights. Washington, D. C.: United States Government Printing Office, 1967).

Ziegler, Benjamin M. Desegregation and the Supreme Court. Boston: D. C. Heath and Company, 1958.

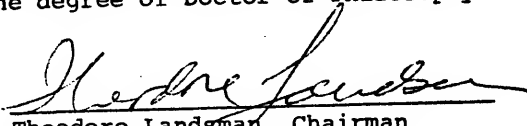
BIOGRAPHICAL SKETCH

Annie Delories Smith was born in Tallahassee, Florida, on July 3, 1944. She attended Florida A and M University and received a Bachelor of Science degree in history in 1964 and a Master's of Education degree in Guidance and Counseling in 1969. She received a Specialist in Education degree from the Univeristy of Florida in 1974.

She taught social studies in Broward County, Florida, from 1964 until 1967 and was a counselor in Dade County, Florida, from 1968 through 1973. She was a graduate assistant in pupil personnel services at P. K. Yonge Laboratory School from 1973 until 1975.

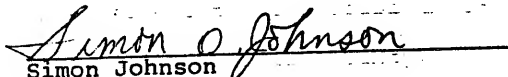
She is the mother of a seven-year-old son, Tarrence. She is a member of the American Personnel and Guidance Association, American School Counselor's Association and the Elementary School Guidance and Counseling Association.

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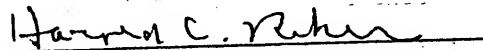
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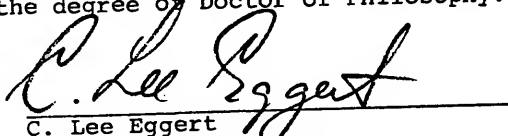
Simon Johnson
Assistant Professor of
Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Harold C. Riker
Professor of Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



C. Lee Eggert
Professor of Education

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1975

B.L. Sharp by M.C. Baker

Dean, College of Education

Dean, Graduate School